

meso-branchial lobes, and the posterior branchial lobes, which are strongly depressed; *surface* strongly and closely granulated irregularly, the granules being of three or four different sizes; a few small tubercles like those on the anterior margin also occur, one being conspicuous on each side, slightly below the middle of the furrow which separates the proto-gastric from the hepatic lobes, and two on each side on the meso-branchial region a little within the middle. Width of carapace 10 lines, length  $5\frac{1}{2}$  lines, transverse length of one orbit  $1\frac{1}{2}$  line, depth of middle of hepatic region 3 lines.

The coarsely granular surface easily distinguishes this species from the smooth and glossy *B. Buchii*, Reuss sp. The anterior lateral margins are also strongly curved. There is a third species in the University collection at Cambridge, distinguished from the other two by a very fine uniform granulation of the surface, but it is not sufficiently perfect for description; it might be called *R. granulosa*.

Rare in the Upper greensand of Cambridge.  
(Coll. Mr. Carter, Cambridge.)

XII.—On the *Aclis unica*, *Auct.* By WILLIAM CLARK, Esq.

To the Editors of the *Annals of Natural History*.

GENTLEMEN,

Exmouth, 29th June 1854.

I PROPOSE, with your permission, to give an account of a very rare mollusk which I discovered this day, and which has hitherto evaded, in a living state, all our researches; I have sought it for thirty years, and may therefore sing "Io Pæans" with the illustrious author of the 'Amorum,' as at last, as with him—

"Decidit in casses præda petita meos."

Let this instance of unexpected success impress on us the value of the "nil desperandum." The discovery of this creature has long been a desideratum, as it will solve several malacological questions: it has from Montagu's time run the gauntlet of nearly all the genera, agreeably to the conchological surmises of naturalists, of whom scarcely two are in accord, and all in error; as my notes require me to place it in a position it has never yet occupied, and which I believe will prove to be its true malacological *status*. Our ignorance of every circumstance attendant on this almost microscopic being has invested it with a strange diversity of position and consequent structure, but the light of

discovery that now dawns on us will dissipate, as it does in every case, misapprehensions, and tell us that the Fates have decreed, we all have been at fault about a very simple creature, which though not absolutely a typical *Rissoa*, is all but one, as the shell only wants the callus on the outer lip; but we have many admitted *Rissoæ* without that appendage; indeed, if we were to look for *strict* typical specialties in either the hard or soft parts of any mollusk, every species must become a genus.

RISSOA UNICA, nobis.

*Aclis unica*, Brit. Moll. vol. iii. p. 222. pl. 90. f. 4, 5.

*Chemnitzia unica*, Alder et nobis.

*Turritella unica*, Fleming.

*Turbo unicus*, Mont. et auct.

*Shell*.—Of eight yellowish-white, rounded, finely reticulated volutions with oblique well-marked sutural lines. The apex is obtuse and not reflexed, as stated by me in another place: I was deceived by imperfect specimens, which led me into the error of supposing that it would prove a *Chemnitzia*.

This is one of the slenderest British shells, having only an axial admeasurement of  $\frac{1}{12}$ , and a diameter of  $\frac{1}{40}$  uncia; the outer lip is thin, and the aperture is oblong-oval and almost entire.

*Animal*.—The general colour is hyaline-white, shot throughout all its organs with a mixture of very minute close-set points, short lines or blotches, of flaky and frosted snow colour. Mantle even with the shell, except that at the apertural upper angle it emits the filament I have so often mentioned as being present in all the *Rissoæ*, and whose particular function is doubtful. The muzzle is slender and rather long, having the first half from the neck, on its upper part, clothed with a very close tunic or tight overlay; the disk is smooth, compressed, bevelled to a fine edge, and almost circular, with a median vertical fissure on the under surface, in which I have often seen the delicate white corneous plates, jaws, and lingual riband: but great powers and much time are required to seize a favourable opportunity of vision in so minute and restless a being. The tentacula are very like those of *Rissoa striata*, moderately long, flat, rounded or obtuse at the tips, quite smooth even under high powers, divergent, with large black eyes, not on pedicles or prominences, but fixed on the centre of their bases with very little external inclination, and widely apart; there is no connecting tentacular veil, nor the least triangularity, foldings, or the presence of apical inflations, as in the *Chemnitzia*; on the march the eyes are usually carried within the margin of the shell. The foot is slender, greatly hollowed out in front and deeply labiated, with distinct, long,

arcuated linear auricles which play on the march, or, as M. Lovèn would term it, "*late vibrantes*," beneath which it is slightly constricted, and a little beyond the middle, posteaally, is fixed on a simple lobe without lateral expansions or terminal cirrhal filament; the light yellow suboval operculum with distinct grossly spiral turns, exactly as in the paucispiral *Littorinidæ*; below the operculum the foot is visibly contracted on each side, and terminates in a rounded rather broad point; no median line is apparent in any part of the sole.

This creature is not at all shy; it remained lively for thirty-six hours, and gave every facility for good examination; it readily creeps up the deepest glasses, and however often brushed down, starts again with unabated vigour. The specimen described was detected in Littleham Cove, between Exmouth and Budleigh Salterton, in the littoral level, in a debris of minute decayed shells mixed with sand and mud that has an offensive odour, the mass being deposited on the margins of deep quiet pools affording nutriment to certain long narrow grassy sea-weeds. I have been thus particular to obviate difficulty to future naturalists, and I wish them success in obtaining a live specimen with less trouble than I have had.

The habitat of this species is, I believe, strictly littoral; its associates are the *Rissoa parva*, *R. striata*, *R. planorbis*, nobis (*Skenea planorbis*, auct.), as these are found in the same mass of spoil.

That this is a Littorinidan and almost a strict Rissoidean animal, allowing a trifling margin for specialty-variations, admits of no doubt. It has no malacological community with *Turritella*, *Aclis*, or *Chemnitzia*; but as the muzzle is carried in nearly a similar position as in the latter genus, the young malacologist must take care in so small an object not to be misled by this circumstance, or by the centrality of the eyes at the base of the tentacula: but the veteran observer with delicate and apt manipulation, patience, and good glasses, will easily detect the vertically cloven disk and corneous jaws, which, with the rissoid simple tentacula, will demonstrate that this animal is merely an elongated *Rissoa*; and in our volume of malacological observations now in the press, we shall deposit it in the section of the elongated species of that genus.

I am, Gentlemen,  
Your most obedient servant,

WILLIAM CLARK.

P.S.—The remarks of Dr. T. Williams on my branchial theory, when finished, will be duly acknowledged either in the 'Annals,' or in the appendix to my "Malacological Observations" now in the press.